

End of Life Care

Cynthia M. Williams, DO

CAPT MC USN

Uniformed Services University



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OBJECTIVES

Know and understand:

- The roles of palliative and hospice care in end-of-life care for older patients
- Techniques for communicating effectively when delivering bad news
- Recommendations for assessing and managing pain
- Best methods for managing non-pain symptoms at the end of life

END-OF-LIFE DEMOGRAPHICS IN THE U.S.

- The majority of deaths occur in elderly adults
- Terminally ill patients spend most of final months at home, but most deaths occur in the hospital or nursing home
- Location of death varies regionally:
 - Portland: 35% in hospitals
 - New York City: > 80% in hospitals

Who is dying in the U.S.?

- Median age of death is 77 years.
- Among survivors to age 65, median age at death is 84 for women, and 80 for men.
- In the frail elderly death follows
 - A long period of progressive functional decline
 - Loss of organ reserve
 - Accompanied by specific disease processes.

Leading Causes of Death: 1997

Heart disease:	31%
Malignant neoplasm:	23%
Cerebrovascular disease:	7.0%
COPD:	4.7%
Accidents:	4.1%
Pneumonia:	3.7%

Account for 75% of all deaths

Natl. Ctr. Health Statistics, CDC, 1997

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QUALITY OF END-OF-LIFE IN THE U.S.

- Typical deaths are slow, associated with chronic disease, and have multiple co-existing problems
- Typical deaths are marked by ↑ dependency & care needs

QUALITY OF END-OF-LIFE IN THE U.S.

- Quality of life during dying process is often poor because of
 - inadequate treatment of distress
 - fragmented care
 - strains on family, support system
- Difficult decisions about use of life-prolonging treatments are common



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Comparing Hospice vs. Palliative Care

Hospice

- Prognosis \leq 6 months
- Focus on comfort care
- Medicare hospice benefit
- Volunteers integral and required aspect of the program

Palliative Care

- Any time during illness
- May be combined with curative care
- Independent of payer
- Health care professionals

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THE HOSPICE MEDICARE BENEFIT

- For beneficiaries with an expected prognosis of 6 months certified by two physicians
- It is a Part A benefit
- Includes: physician services, nursing care, medical equipment and supplies, medications, short-term inpatient care for symptom management & family respite, PT or OT, bereavement services, home-health aide services

OBSTACLES TO EFFECTIVE HOSPICE CARE

- Limited access
- Lack of family support
- Late referral
- Difficulties in prognosis



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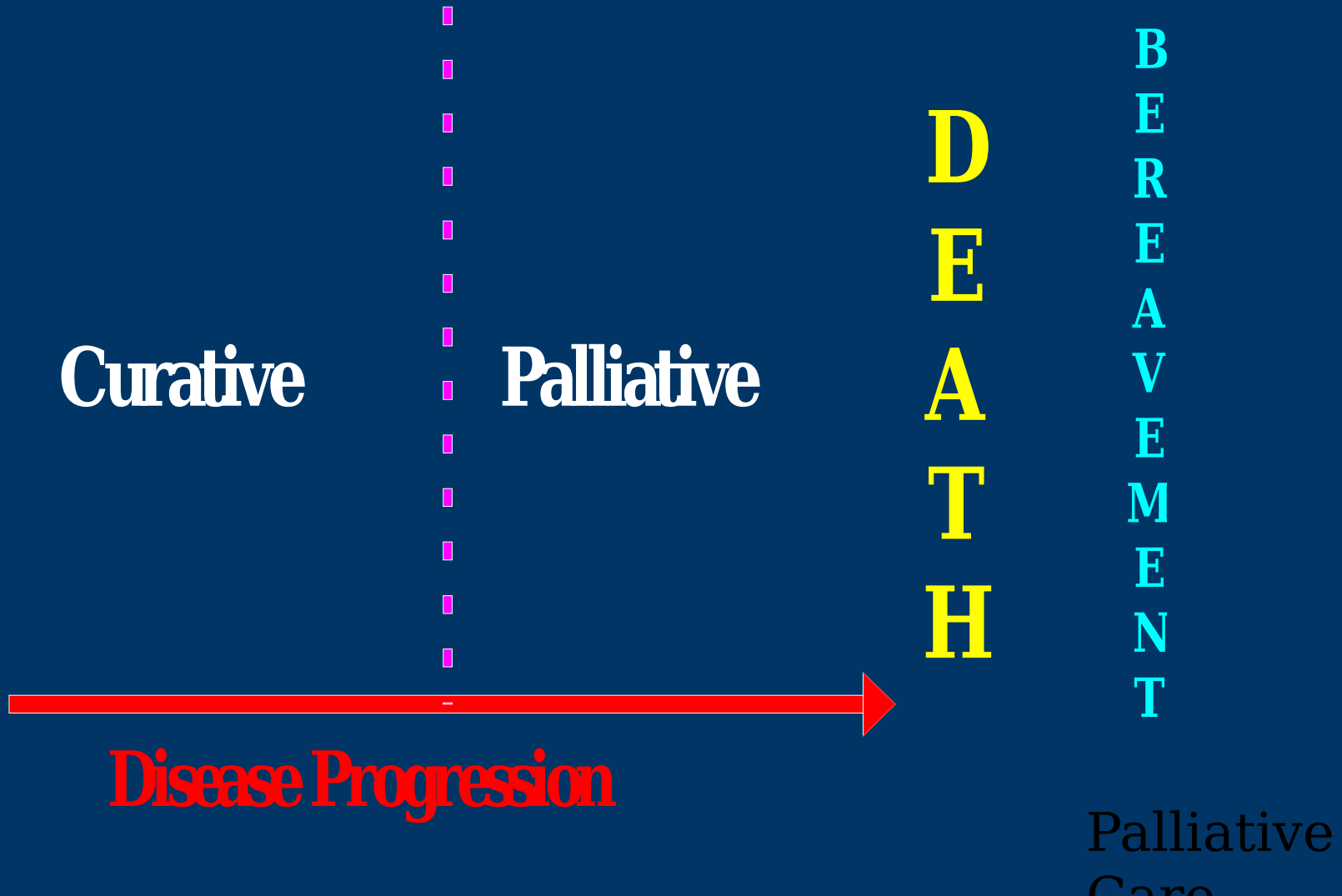
Prognosis Can Be Difficult to Predict

Life Defining Illness → Actively Dying



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Curative vs. Palliative Model of Care



Potential Goals of Care

- Cure of disease
- Avoidance of premature death
- Maintenance or improvement in function
- Prolong life
- Relief of suffering
- Quality of life
- Staying in control
- A good death
- Support for families and loved ones



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COMMUNICATING BAD NEWS

A systematic approach to delivering bad news can improve the physician's, patient's, and family's ability to cope with situation and plan for the future

PREPARING TO DELIVER BAD NEWS

- Plan what will be discussed
- Ensure that all medical facts and confirmations are available
- Choose an appropriate setting
- Deliver the news in person, privately
- Allow time for discussion
- Minimize interruptions

DETERMINING WHAT THE PATIENT UNDERSTANDS

Ask questions like the following:

- “What do you know about your illness?”
- “When you first had symptom x, what did you think it might be?”
- “What have other doctors told you about your condition or procedures that you have had?”

WHAT DOES THE PATIENT WANT TO KNOW?

Make no assumptions - remember that:

- Patients have the right to be told the truth but also to decline to learn unwanted information
- A patient may not want to know full details
- A patient may wish to have a family member informed instead

Cultural Differences



- **Who gets information?**
 - **How to talk about information?**
- Who makes decisions?**
- **Ask the patient**
 - **Consider a family meeting.**



The Day After Tomorrow

1891

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DELIVERING BAD NEWS

- Use a sensitive, straightforward manner
- Avoid technical language or euphemisms
- Check for understanding and clarify difficult concepts
- Use phrasing that sends a “warning shot” to prepare the patient:
e.g., “Mr. X, I feel bad to have to tell you this, but the growth turns out to be cancer.”

AFTER DELIVERING BAD NEWS

Respond to feelings

- Use active listening
- Encourage the expression of emotion
- Acknowledge the patient's emotions

AFTER DELIVERING BAD NEWS

Organize a plan and follow-up

- Address patient's concerns in immediate plan
- Set an appointment for a follow-up visit
- Discuss additional tests, referrals, sources of support
- Provide information on how you can be reached for additional questions



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Symptoms at the End of Life: Cancer vs. Other Causes of Death

	Cancer	Other
Pain	84%	67%
Trouble breathing		47% 49%
Nausea and vomiting		51% 27%
Sleeplessness	51%	36%
Confusion	33%	38%
Depression	38%	36%
Loss of appetite	71%	38%
Constipation	47%	32%
Bedsores	28%	14%
Incontinence	37%	33%

Seale and Cartwright, 1994

EFFECTIVE PAIN MANAGEMENT

- Know the types of pain
- Assess the patient's level of pain
- Minimize pain with nonpharmacologic techniques
- Add pharmacologic analgesia when needed
- Avoid analgesics harmful for older adults
- Anticipate and manage the side effects of opioids

DEFINITIONS OF PAIN

- Unpleasant **sensory** and **emotional** experience associated with actual or potential tissue damage
- ***Nociceptive pain***: consequence of direct tissue damage
- ***Neuropathic pain***: consequence of disordered nervous system function

NOCICEPTIVE PAIN

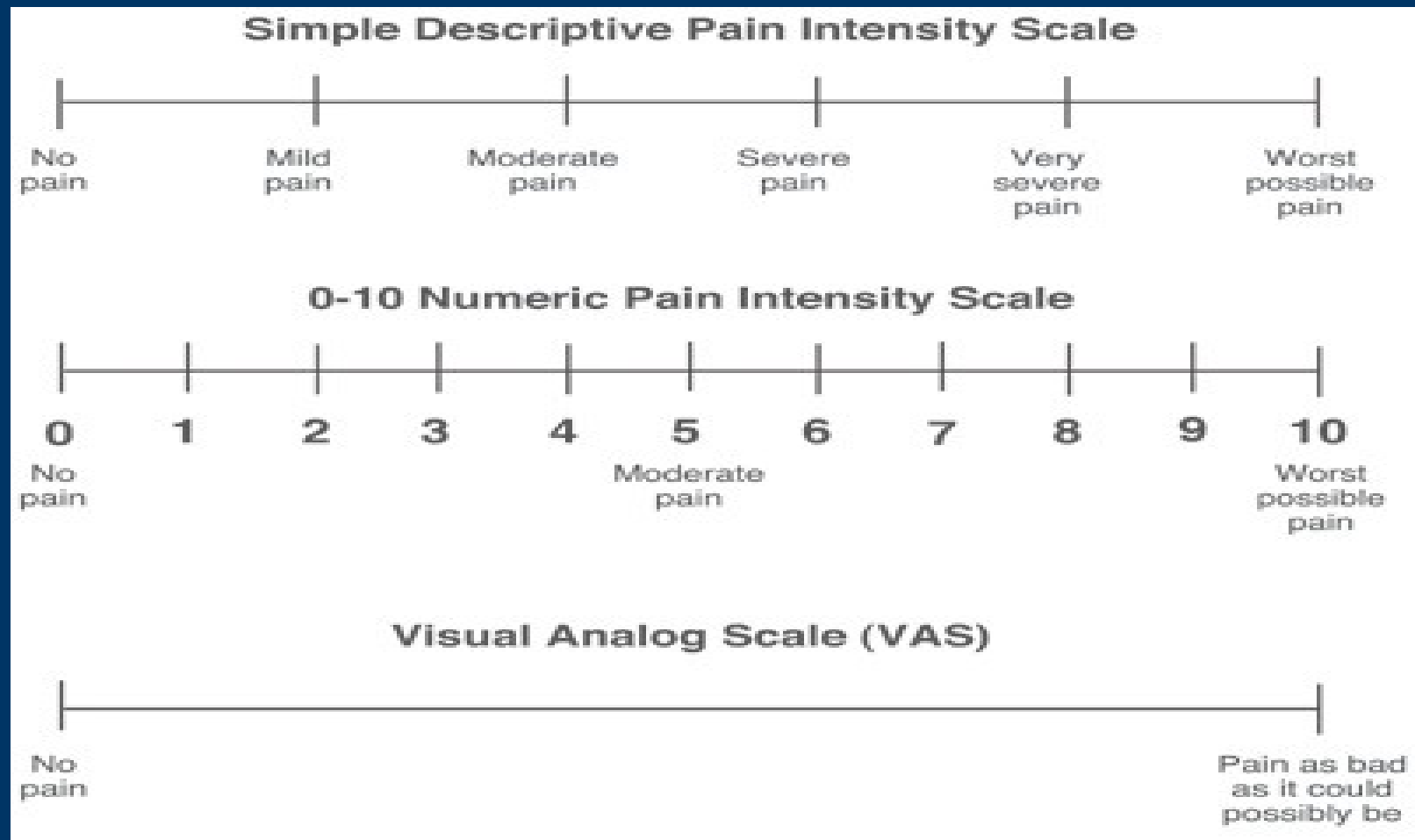
- The result of direct tissue damage to normally functioning nerves, e.g., arthritic, acute postoperative, post-traumatic pain
- Somatic
 - Skin, soft tissue, muscle, bone
 - Well localized, stabbing, aching, throbbing
- Visceral
 - Cardiac, pulmonary, GI pain
 - Poorly localized, dull or crampy

NEUROPATHIC PAIN

- The result of disordered functioning of the central or peripheral nervous system in the absence of ongoing tissue damage
- Symptoms: burning, tingling, shooting or stabbing pain, numbness

ASSESSING PAIN IN COGNITIVELY INTACT PATIENTS

Use a standard scale to track the course



ASSESSING PAIN IN COGNITIVELY IMPAIRED PATIENTS

- Ask the patient about pain, even in advanced dementia
- Assess nonverbal cues:
 - Facial expressions (grimacing, frowning)
 - Motor behaviors (bracing, restlessness, agitation)
 - Vocal cues (groaning, screaming, moaning)

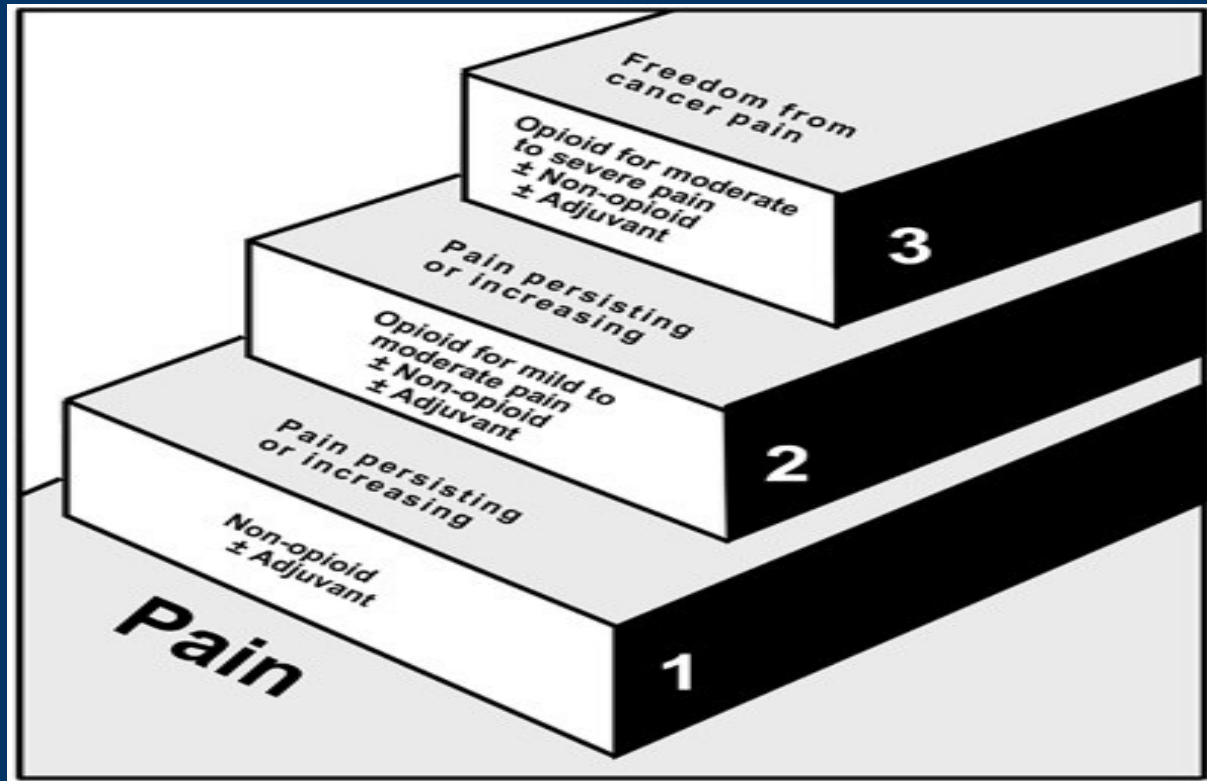
BALANCING THE RISKS IN TREATING PAIN

The risk of under treating pain
is more a concern than the risk
of
worsening delirium with
medications

NONPHARMACOLOGIC PAIN MANAGEMENT

- Encourage activity and self-care
- Employ physical modalities: heat, cold, massage, acupuncture, transcutaneous electrical nerve stimulation
- Recommend cognitive-behavioral interventions: relaxation and imagery, psychotherapy, structured support
- Educate the patient

PHARMACOLOGIC PAIN MANAGEMENT



World Health Organization
Three-Step Analgesic Ladder



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USING OPIOIDS (1 of 3)

- Peak plasma concentration is reached
 - 60-90 minutes after oral dosing
 - 30 minutes after SC or IM dosing
 - 6 minutes after IV injection
- Conjugated in the liver, excreted via kidney
- Effective half-lives of 3-4 hours with normal renal clearance
- Steady state achieved in 24 hours

USING OPIOIDS (2 of 3)

Determine opioid requirements over 24 hours

- If pain remains uncontrolled, increase doses by 25% to 50% for mild to moderate pain and by 50% to 100% for severe pain
- Extended-release Opioids : 8, 12, or 24 hours
- Fentanyl patch: 48-72 hours
- Use extended relief forms when appropriate

USING OPIOIDS (3 of 3)

- Provide “rescue” analgesia for breakthrough pain or acute pain flares
 - o 5% to 15% of the 24-hr dose
 - o Offer every 1 hr orally
 - o 30 min SC/IM
 - o 10 min IV

AN OPIOID TO AVOID:

MEPERIDINE

- Poorly absorbed orally
- Short half-life (3 hours)
- Main metabolite, normeperidine, has no analgesic properties but a long half-life (6 hours)
- Accumulation of normeperidine may cause tremulousness, dysphoria, myoclonus, and seizures

OPIOID SIDE EFFECTS

Constipation

- Nausea and vomiting
- Sedation and delirium
- Respiratory depression
- Pseudoaddiction
- Tolerance
- Dependence

MANAGING GI EFFECTS OF OPIOIDS

Constipation

- Prevent with scheduled mild laxatives

Nausea and Vomiting

- Encourage patients to eat frequent, small meals
- Provide promotility agents (metoclopramide), serotonergic blocking agents (ondansetron, granisetron) or dopaminergic blocking agents (haloperidol, metoclopramide, prochlorperazine)
- If symptoms are related to head movements, consider meclizine or scopolamine

MANAGING SEDATION & DELIRIUM OF OPIOIDS

- If pain control is adequate, decrease dose by 25%
- Change to a different opioid preparation
- Use small doses of psychostimulants (2.5 to 5 mg methylphenidate or dextroamphetamine) for excessive somnolence
- Use non-sedating antipsychotics (haloperidol, risperidone) for delirium

MANAGING RESPIRATORY DEPRESSION OF OPIOIDS

Key Facts

- Does not occur in patients on long-term opioids
- Can occur in opioid-naïve patients and those whose opioid dose is rapidly escalated
- Is always preceded by slowly progressive somnolence
- Tolerance to respiratory depressant effects develops rapidly (48-72 hours)

Treatment

- Dilute naloxone (10:1) infused until breathing pattern returns to normal

OPIOIDS AND ADDICTION

Addiction is defined as psychologic dependence on drugs and a behavioral syndrome characterized by compulsive drug use and continued use despite harm to self and others

- Opioids do **NOT** cause psychologic dependence
- Use of opioids for pain management does **NOT** cause addiction

PSEUDOADDICTION WITH OPIOIDS

- Occurs in context of
 - undertreatment of pain
 - behavioral, family, or psychologic dysfunction
- Consists of behaviors that are reminiscent of addiction but driven by untreated or undertreated pain
- Disappears once pain control is adequate

TOLERANCE TO OPIOIDS

Tolerance is defined as reduced effects of a given dose of medication over time

- Tolerance to analgesic effects is rare
- Doses remain unchanged when pain stimulus is stable
- Tolerance to unwanted side effects is observed and is desired
- Disease progression (not tolerance), should be suspected when increasing doses are required for pain control

PHYSICAL DEPENDENCE ON OPIOIDS

Withdrawal syndrome

- Develops if opioids are abruptly discontinued or dose is rapidly decreased
- Results from neuropsychologic changes from exogenous opioids
- Symptoms:
 - Nausea, vomiting, diarrhea, abdominal pain
 - Body aches
 - Psychosis and hallucinations
- Treatment: If pain stimulus lessens, reduce dose by 50% every 2 to 3 days



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SUMMARY (1 of 2)

- Palliative care seeks to prevent or relieve symptoms without effecting cure
- All patients in hospice care are dying, whereas patients in palliative care may not be terminal
- Communicating bad news requires preparation, sensitivity to patient's understanding and needs, and organized plan and follow-up

SUMMARY (2 of 2)

- Pain should be assessed in all patients, and adequate treatment may combine drugs with nonpharmacologic interventions
- Opioids should be used as needed, with careful attention to dosing and side effects
- Clinicians should watch for and treat other end-of-life symptoms: constipation, nausea & vomiting, diarrhea, anorexia & cachexia, depression, delirium, dyspnea, and cough

CASE #1 (1 of 3)

A 78-year-old woman with multiple serious medical conditions who is minimally responsive is admitted to the general medical service for palliative care. Her family agrees that her living will should be honored, so no aggressive therapies will be used.

The patient periodically becomes restless and moans when turned in bed but cannot describe or rate her discomfort. Symptoms improve after administration of morphine sulfate, 2 to 4 mg IV prn.

CASE #1 (2 of 3)

Which of the following is the most appropriate management strategy during the next 24 to 48 hours?

- Continuation of the current regimen
- Fentanyl 25 µg transdermally
- Sustained-release morphine sulfate, 15 mg orally b.i.d.
- Morphine sulfate elixir, 5 to 10 mg orally q 4 hours
- Morphine sulfate 1 mg / hour by continuous IV

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CASE #2 (1 of 3)

A 75-year-old woman has ovarian cancer with metastases to the liver and peritoneum. Abdominal pain is well controlled with sustained-release morphine sulfate, 200 mg orally b.i.d., but now she reports severe pain once every 3 days.

CASE #2 (2 of 3)

Which of the following is the most appropriate analgesia for the breakthrough pain?

- Fentanyl 25 µg transdermally
- Morphine sulfate, 60 mg orally
- Sustained-release oxycodone, 30 mg orally
- Propoxyphene, 65 mg orally
- Pentazocine, 60 mg IM

CASE #2 (3 of 3)

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- **Morphine sulfate, 60 mg orally**
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- Pentazocine, 60 mg IM

Questions?



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PALLIATION OF NONPAIN SYMPTOMS

- Constipation
- Nausea and vomiting
- Diarrhea
- Anorexia and cachexia
- Delirium
- Depression
- Dyspnea
- Cough

CONSTIPATION

Key Facts

- Common for terminally ill patients
- Caused by opioids, immobility, poor fluid intake

Treatment

- Use prophylactic laxatives: stool softener & bowel stimulant (docusate sodium & senna or bisacodyl)
- If ineffective, add osmotic laxative (sorbitol)
- If no bowel movement in 4 days, administer enema
- If impaction occurs: disimpact manually or with enemas before starting laxative therapy

NAUSEA AND VOMITING

Key Facts

- Occur in 40% to 70% of patients with advanced cancer
- May be caused by disease or its treatment

Treatment

- Select antiemetic agent on the basis of
 - likely cause
 - pathway mediating the symptoms
 - neurotransmitters involved

EMESIS CAUSED BY DRUGS & TOXINS

Common Causes

- Drugs: opioids, digoxin, estrogen, cefotaxime
- Biochemical disorders: hypercalcemia, uremia
- Toxins: tumor-produced peptides, infection, radiotherapy, abnormal metabolites

Pathway

- Chemoreceptor trigger zone in vomiting center
- Receptors: dopamine, serotonin, histamine receptor

Treatments

- Butyrophenones, phenothiazine (e.g., haloperidol)
- Prokinetic agents (e.g., metoclopramide)
- Serotonergic antagonists (e.g., ondansetron)

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EMESIS ORIGINATING IN THE GUT

Common Causes

- Gastric irritation, gastric distension, liver capsule stretch
- Opioid stasis, constipation, tumors, peritoneal inflammation
- Upper bowel, genitourinary, biliary stasis

Pathway

- Gut
- Receptors: serotonin, histamine receptor type 1

Treatments

- Motility agents for stasis (e.g., metoclopramide)
- Serotonin antagonists, antihistamines

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EMESIS OF OTHER ORIGINS

Vestibular Apparatus

- Receptors: muscarine, acetylcholine, histamine receptor type 1
- Common causes: drugs (aspirin, opioids), motion sickness (Ménière's disease, labyrinthitis), local tumors (acoustic neuroma, brain tumors, bone metastases to base of skull)
- Treatment: scopolamine, hydrobromide, meclizine

Cerebral Cortex

- Common cause: raised intracranial pressure
- Treatment: dexamethasone

ANOREXIA AND CACHEXIA

Loss of appetite is almost universal among terminally ill patients

- Anorexia in actively dying patients who do not wish to eat should not be treated
- Symptoms of dry mouth should be treated
- Appetite stimulants (e.g., corticosteroids) may benefit patients in early stages
- Encourage patients to eat whatever is most appealing, without dietary restrictions

DELIRIUM

Common and distressing for both terminally ill patients and their families

- Identify potentially reversible causes (infection, impaction, uncontrolled pain, urinary retention, hypoxia)
- Use low doses of nonsedating antipsychotic
- Actively dying, nonambulatory patients may benefit from sedating antipsychotic
- Avoid benzodiazepines

DEPRESSION

Under-recognized and undertreated in terminally ill

- Vegetative symptoms (insomnia, anorexia, weight change) may not be reliable because of underlying illness
- Be alert for mood change, loss of interest, suicidal ideation
- Treat aggressively: antidepressants, psychiatric consultation, ECT are appropriate

DYSPNEA

Assessment

- Patient self-report is only reliable measure
- Respiratory rate and lab tests often do not correlate

Management

- Treat underlying cause, but do not delay symptom management
- Use O₂ if saturation < 90% but use cautiously with patients who retain CO₂
- Use fan, open window to stimulate 5th cranial (trigeminal) nerve & reduce dyspnea
- Benzodiazepines control anxiety but not dyspnea
- Opioids reduce respiratory drive, dyspnea

COUGH

Causes

- Production of excess fluids
- Inhalation of foreign material
- Stimulation of irritant receptors in the airway

Management

- Treat underlying cause
- Add opioids if underlying disease not resolvable
 - dextromethorphan: suppresses cough with few sedative effects
 - codeine, hydrocodone elixirs
 - methadone syrup for longer duration of action
- Nebulized anesthetic for irritated pharynx of local infection or malignancy

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Co-Editors:

Karen Blackstone, MD

Elizabeth L. Cobbs, MD

GRS5 Chapter Authors:

Stacie T. Pinderhughes, MD

R. Sean Morrison, MD

GRS5 Question Writers:

Cheryl Vahl, RN, MSN, AOCN

Keela Herr, RN, PhD

Contributor: Laurel Coleman, MD

Special Advisor: Richard Dupee, MD

Medical Writer: Barbara B. Reitt, PhD, ELS (D)

Managing Editor: Andrea N. Sherman, MS

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